

ABSTRACT OF THE DISCLOSURE

Methods for treatment and prevention of graft rejection, e.g., in response to tissue or organ transplantation, are disclosed. The disclosed methods comprise administration of 5 compositions of complexes of heat shock/stress protein (hsps) including, but not limited to, hsp70, hsp90, and gp96, either alone or in combination with each other, noncovalently bound to antigenic molecules, to suppress the immune response to the grafted tissue or organ. In addition, administration of 10 compositions containing un-complexed stress proteins (i.e., free of antigenic molecules) to suppress the immune response to the grafted tissue or organ are also disclosed. The invention encompasses administration of heat shock proteins before, after, or both before and after transplantation or 15 grafting. In addition, the invention encompasses administration of donor tissue sample prior to administration of heat shock protein and subsequent transplantation or grafting.